

June 27, 2008

Comment on FCC "Free Wireless Internet Plan"

I'm writing as a retired private citizen representing no company or trade group and only interested in seeing the greatest public value obtained from a precious public resource, radio spectrum. As such, I would like to register the strongest possible support for the proposal to provide free, nationwide, high-speed wireless Internet service using spectrum in the AWS band.

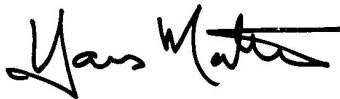
When employed, I worked for Bell Laboratories (1968 – 1996) and Hewlett-Packard (1996 – 2002). My last years at Bell Laboratories were as Development Vice President responsible for research, design, development, manufacturing, and deployment of cellular base stations in technologies including analog, TDMA, GSM, and CDMA. From this background, and from my years as a consultant-in-residence (a.k.a. Group Technical Officer) at Hewlett-Packard, I have come to appreciate the power of a wise and timely technical decision and the creativity of our broad society in turning technical capability into market and social value. I also appreciate the imagination that can be applied to gaining fair or unfair advantage when a significant change in capability presents itself. In this spirit, I resist the self-serving concerns expressed by CTIA and others in opposition to the nationwide wireless Internet service proposal.

The provision of free, nationwide, wireless Internet service will have a positive impact on the welfare of our nation far beyond what can be easily imagined today. Not only will individual connectivity and access to information be expanded and enhanced, but interconnection with devices ranging from traffic sensors and controllers to utility meters and environmental sensors will make possible services, efficiencies, and enhancements we have not yet imagined.

The very power of such a widely deployed system will necessitate operational service rules that might not be necessary in a system of less capability. Applications will most certainly proliferate to the point where system capacity will become an operational limitation. To manage this, bandwidth to a user must be rationed by technological means. A simple approach would be to limit the channel capacity serving any single IP address, but I'd fear the creation of devices and applications that instituted links with multiple IP addresses and multiplexed their data to foil a simple throughput limitation. It is certainly possible to outlaw such devices and applications, but it is not clear that such regulation can be easily enforced. There may be protocol techniques that prevent such devices and applications; I'm not familiar with any. I'd suggest that this area deserves expert attention.

Whatever the operational challenges, the deployment of free, nationwide, wireless Internet service would be a watershed event in the interconnection and integration of this nation. It's an opportunity of historic consequence that must not be missed. If I can be of help in any way in assisting this important project, please feel free to contact me.

Yours truly,

A handwritten signature in black ink, appearing to read "Hans Mattes". The signature is fluid and cursive, with the first name "Hans" being more prominent than the last name "Mattes".

Hans Mattes
3935 Skyfarm Drive
Santa Rosa, CA 95403
mattes@sonic.net
707-578-3628
707-321-7212